A New Species of Meloid Beetle, with a Key to the North American Species of the Genus Leonidia Cockerell.* (Coleop.)

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The following new species of *Leonidia* was reared from the cells of the bee, *Anthophora occidentalis* Cresson, which were collected in the vicinity of Colorado Springs, Colorado, by Mr. G. W. Goldsmith, of the Alpine Laboratory, Manitou, Colorado.

Leonidea anthophorae n. sp.

♂. Piceous; elytra fulvous, at the sides entirely covering the first abdominal segment; length 12 mm.

Head piceous, except the front very dark mahogany red; labial palpi 3-segmented, the maxillary palpi 4-segmented; last segment of the maxillary palpi equal in length to the third (Fig 2, a); mandibles edentate, blunt at the tip; labrum somewhat depressed anteriorly, the anterior margin very slightly and broadly emarginate, moderately punctate throughout, clothed with sparse, erect, black hairs, anteriorly with a fringe of shorter, fuscous hairs; clypeus glabrous and with scattered punctures, the latter slightly larger than those of the labrum, anterior margin of clypeus broadly concave with a small median tooth; suture between the clypeus and the front indistinct; front and vertex glabrous, the interantennal area of the front with scattered, very minute punctures, remainder of front and vertex with sparse, rather large punctures interspersed with very minute punctures like those of the lower part of the front; front and vertex clothed with sparse, erect, black hairs; antennae 10-segmented, the first two segments glabrous, sparsely punctate, the remaining eight segments densely punctulate and pubescent; first segment campanulate, second segment slightly shorter than the first and almost equilateral; third segment longer than either the second or the fourth; fourth to ninth segments almost equal in length but the distal ones narrower and more rectangular; ultimate segment almost twice as long as the penultimate, and acute at the tip (Fig. 2, b).

Prothorax piceous, glabrous, clothed with sparse, erect, black hairs; anterior half sparsely punctate, interspersed with very minute punctures; posterior half very scatteringly punctate; prothorax four-fifths as long as wide, the base margined and

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somewhat sinuate; scutellum large, prominent, glabrous, punctate and clothed with sparse, erect, black hairs; elytra fulvous, rugose, punctured, clothed with sparse, erect, black hairs, at the sides entirely covering the first abdominal segment.

Abdomen piceous to blackish brown, the hind margins of the segments testaceous; all of the segments subcorneous, the basal sternites somewhat less so medially than elsewhere; abdominal tergites with sparse punctures, and with sparse, erect, black hairs; sternites punctured and pubescent like the tergites, except sternites four to seven inclusive with a narrow, transverse area of dense, erect, black hairs; ultimate sternite biparted on the median line.

Legs piceous, clothed with sparse, erect, black hairs; tibiae with well developed spurs; tarsi slender; tarsal claws with a long, basal bristle.

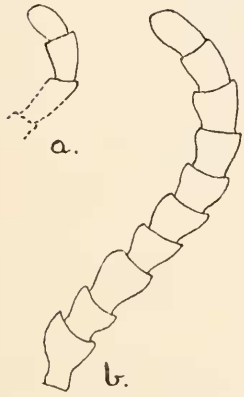

Fig. 1

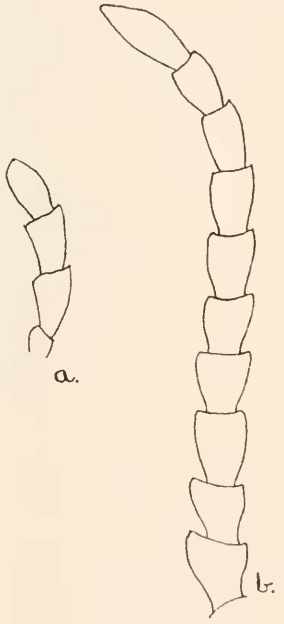

Fig. 2

Fig. 1—*Leonidia neomexicana* Cockerell: a, maxillary palpus; b, antenna. (Original.)
Fig. 2—*Leonidia anthophorae* n. sp.: a, maxillary palpus; b, antenna. (Original.)

♀. Similar to the male; more ferruginous; antennae of same form but slender, not so robust; abdominal tergites much less corneous, almost membranous; abdominal sternites two to

six inclusive membranous medially, subcorneous laterally; sternites seven and eight entirely subcorneous, the eighth entire, not biparted on the median line.

Holotype: ♂, Colorado Springs, Colorado, emerged from cell of *Anthophora occidentalis* Cresson, June, 1926; in collection of University of Minnesota. *Allotype*: ♀, Colorado Springs, Colorado, emerged from cell of *Anthophora occidentalis* Cresson, June, 1926; in collection of University of Minnesota. *Paratypes*: 7 ♂ and 6 ♀, Colorado Springs, Colorado, emerged from cells of *Anthophora occidentalis* Cresson, June, 1926; in collections of University of Minnesota, American Entomological Society of Philadelphia, and Dr. M. H. Hatch.

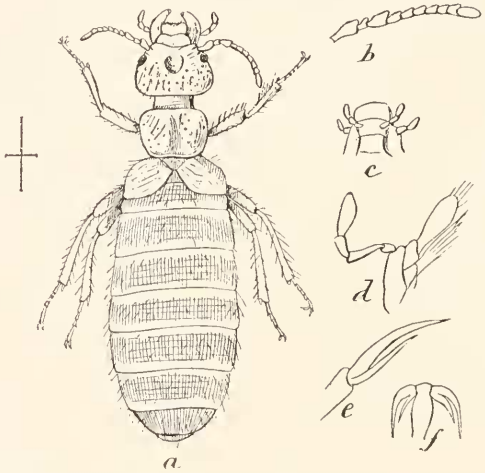

Fig. 3—*Leonidia vilevi* Dugès: a, adult female; b, antenna; c, labium; d, maxilla and palpus; e, tarsal claw from the side; f, tarsal claw from above. (From E. Dugès Insect Life, U. S. Dept. Agr.)

This species is closely related to *L. neomexicana* Ckll. It differs from *neomexicana* principally in the form and the comparative lengths of the ultimate segments of the maxillary palpi and the antennae, as is shown in Fig. 1, a and b (*neomexicana*) and Fig. 2, a and b (*anthophorae*). The figures were made by the author from the type in both cases. *Anthophorae* appears to be the most primitive of the three species of this genus so far known from North America, on

account of the fact that in certain of the paratypes the last segment of the antennae displays remnants of a suture, indicating that at some previous time the antennae have been eleven segmented, the last two segments having fused to form the present ten-segmented antennae.

Key to the Species of Leonidia.

1. Second and third segments of the antennae oblique, with one side produced, Fig. 3, b; last segment of the maxillary palpi almost twice as long as the third segment, Fig. 3, d.....*rileyi* Dugés.
   Second segment of the antennae almost equilateral, with one side scarcely produced, the third segment equilateral; last segment of the maxillary palpi not longer than the third segment .....2.
2. Last segment of the antennae acute at the tip, almost twice as long as the penultimate segment, Fig. 2, b; last segment of the maxillary palpi equal in length to the penultimate segment, Fig. 2, a.....*anthophorae* n. sp.
   Last segment of the antennae rounded at the tip, only slightly longer than the penultimate segment, Fig. 1, b; last segment of the maxillary palpi distinctly shorter than the penultimate segment, Fig. 1, a.....*neomexicana* Ckll.

Specimens of the genus *Leonidia* shrivel and become greatly distorted when pinned in the same manner as other Coleoptera. This is especially true of the abdominal region which is only slightly chitinized. To overcome this distortion the type material of *anthophorae* was prepared in the following manner: The live specimens were dropped in boiling water and removed immediately; they were then dehydrated in alcohols, being allowed to stand 24 hours in 30%, 50%, 75%, 85% and 95% alcohol respectively; they were then transferred to xylol, in which they remained four or five days; the specimens were then pinned in the usual manner. This method produced very good mounts. The hot water treatment, however, results in the segments of the body and appendages remaining distended after mounting, while in specimens pinned in the usual way the segments of the body and appendages contract into one another upon drying. This accounts for the extraordinary length of the antennae in Fig. 2, b, as compared with Fig. 1, b. It was taken into account in the identification of the material.